



EIQ Form 2.9 Stack Test/Continuous Emissions Monitoring Worksheet Instructions for Form 780-1447

This form is required only if stack tests or continuous emission monitoring results are used to obtain emission factors. Complete this form if you use the results from a stack test or a Continuous Emission Monitor, or CEM, to calculate an annual emissions factor for a pollutant emitted from the tested stack. If the testing determined the emission rate for more than one pollutant, you must complete a separate Form 2.9 to calculate the emission factor for each pollutant. The same emission point may emit other pollutants that do not have an emission rate established by the testing. If a stack emits an untested pollutant, determine the amount of the pollutant emitted by another method and enter it on *Form 2.0 Emission Point Information*, along with the stack test emissions.

The documentation from the testing report should include the minimum number of summary pages necessary to validate the emission and production rate and other testing information reported.

Note: Do not send the entire stack test report or all the results from the continuous emissions monitoring.

Complete the Facility Name, Federal Information Processing Standard, or FIPS, County Number, Plant Number and Year of Data fields at the top.

Emission Unit Number - This is the unique identification number for each specific stack or CEM location. This identification number must match the point number entered on *Form 1.1 Process Flow Diagram*, *Form 1.2 Summary of Emission Points* and *Form 2.0 Emission Point Information*.

Source Classification Code - This is a required field. This eight-digit code identifies the type of combustion or processes associated with an emission point. Source Classification Codes, or SCCs, specific to your facility are contained in AP-42 U.S. Environmental Protection Agency's *Compilation of Air Pollution Emission Factors* or *Factor Information and Retrieval System*. If you cannot locate a SCC specific to your process, use the SCC most closely associated with your process.

Segment Number - This is a two-digit number assigned by the facility used to uniquely identify processes associated with an emission point. Generally, if an emission point, i.e., EP01 has three processes associated with it, then segment numbers 01, 02 and 03 will be assigned to those processes. Once assigned, this number should remain constant from year to year. If there is a change in the SCC used by the facility to identify a process, a new segment number will be assigned to that process or SCC.

Stack Number - This is the number used to uniquely identify the specific stack. This stack number must match the stack number shown on *Form 1.1 Process Flow Diagram*.

Pollutant Tested - This is the criterion or toxic pollutant tested.

Chemical Abstract Service Registry Number - Enter the Chemical Abstract Service, or CAS, Registry number for the chemical tested.

Emission Source Information

Equipment Make/Model - Enter a description of the type of equipment that is the source of emission.

Control Device Type - Give a general description of the type of any pollution control devices used for the pollutant tested. The pollutant for which the control device is used must be the same as the pollutant tested in the stack test.

Limitations on Emissions, Production or Operating Time (if any) - These are any enforceable conditions that may have been placed on the process by an air permit or other restriction. Typically, air permit conditions may limit the annual amount of the emissions or the amount of a pollutant that may be emitted for a specific time. The permit may also restrict the production rate to a certain maximum level or limit the amount of time that the process may be operated. Any condition that creates an enforceable limitation on the emission point should be entered into this box.

Stack Test Information

Testing Firm Name and Address - Enter the name and address of the firm that actually performed the stack test.

EPA Method Used - Enter the number of the EPA Reference Method followed in testing procedures for the specific pollutant in the stack test.

Test Date(s) - Enter the date or dates of the stack test for the pollutant being tested.

Results - Enter the results of the stack test as they apply to meeting any limitations or to finding the emission rate of the pollutant. You may report this information in an attachment.

Compliance - Compliance means whether the stack test indicated the emissions from the stack were within any permit or other limiting conditions. Checking "Yes" means that the test indicated all limiting conditions were met.

Note: Do not send the entire stack test report or all the results from the continuous emissions monitoring.

Test Technique - This box identifies the conditions of the stack test.

- Checking "Operational Rate" means the stack test was conducted when the equipment was running at the normal operating rate. The operational rate test is acceptable for calculating the actual emissions from the stack test.
- Checking "Maximum Design Rate" indicates the stack test was performed while the equipment was running at the maximum rate possible. The Maximum Design Rate test can be used only for calculating the maximum potential emissions for the pollutant.
- Choosing "Both" indicates that both operating conditions were tested.

Latest Calibration of Testing Equipment - This is the last date that the testing equipment passed a calibration test before it was used to perform this stack test.

Note: Failure to calibrate testing equipment may result in the rejection of test data.

Agency Observing Test - Indicate which agency observed the test. Checking "Other" indicates a member of an agency other than EPA or the department was present. Please list the agency represented.

Note: If you fail to select at least one box, the Air Pollution Control Program will not be able to accept the test.

Name of Observer(s) - Enter the full names of all the people observing the test.

Continuous Emission Monitoring Information

Concentration of Pollutant - This is the weighted average concentration of the pollutant emitted as indicated by the monitoring results for the entire year. Use the weighted average concentration figure to determine the emissions of the pollutant. Obtain the weighted average for the concentration figure by multiplying the concentration and flow rate figures for each averaging period and summing these numbers. Then divide the figure calculated in step 1 by the sum of the average flow rates for the entire year. This will give the weighted average for the concentration figure for the entire year. Make sure to enter the concentration figure in mass per volume of gas in the units box.

Flow Rate of Stack - This is the average flow rate indicated by the monitoring results for the entire year. Enter the flow rate figure in volume of gas per time in the units box.

Latest Calibration of Monitor - This is the date the monitoring system was last calibrated.

Results of Calibration - Give the results of the latest calibration test. Typically, the results of CEM calibration are expressed with relative accuracy or percent variation from a known testing standard.

Monitor Averaging Period - This is the time frame for which the CEM averages the results of the monitoring.

Percent Monitor Down Time - This is the percentage of time that the CEM system has not been operating or has not been operating properly for the year. A high percentage of down time for the CEM may result in rejection of the data for determining the emissions of a pollutant.

Emission Factor Calculation

Emission Rate - This is the rate determined from a stack test done under operating conditions or the average rate from continuous monitoring for the entire year. Report the emission rate in pounds of pollutant emitted per hour of operation. The emission rate can be based on input or output rates from the process. The method should be consistent with that used in the production rate, in the testing and the annual throughput figures entered on *Form 2.0 Emission Point Information*.

Production Rate - This is the amount of material used in or produced by the process during the stack test or monitoring. Express the production rate figure in units per hour of operation. Express the production rate in the same units as the annual throughput in block 4 on Form 2.0. The units must correspond to the SCC Emission Factor Units. Documentation should include a summary page from the test data that verifies both the emission and the production rates.

Emission Factor - This is found by dividing the emission rate by the production rate. Enter this calculated emission factor in the emission factor box. Also, enter the emission factor units expressed in pounds per unit in the units box. The units used on Form 2.0 must be the same as those entered by the SCC on Form 2.0.

Enter the following Emission Point Information on Form 2.0

Enter the calculated emission factor into the appropriate pollutant box on Form 2.0, section [5], block (2). If the emission point has an active control device and this control device was in operation at the time of the stack test, please indicate that the emission factor includes the control efficiency by marking Form 2.0, section 3, block 8, Emission Control Status, as "Controlled."

For all other criteria pollutants released through this stack but not subject to a stack test or CEM, please choose another method to determine the emission factor.

Enter the following on Form 2.0C, Emission Point Information

If a control device is in use, enter the control device type and required details on Form 2.0C.

For More Information

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